2.0 TREATMENT AT TECHNICAL AREA 16

This section presents a general description of the open burning (OB) units at the Los Alamos National Laboratory (LANL) Technical Area (TA) 16 Burn Ground. It also presents the general waste management practices for wastes treated at the two units. The information provided in this section is submitted to address the applicable miscellaneous unit requirements of the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1 NMAC) § 270.23, and 20.4.1 NMAC, Subpart V, Part 264, Subpart X, revised June 14, 2000 [6-14-00]. Attachment G of this permit renewal application contains more detailed information on and figures of the TA-16 OB units and the waste management practices associated with them. A summary of applicable regulatory references for these units and the corresponding location where the requirement is addressed in this permit renewal application is located in Attachment G, Table G-1.

2.1 TA-16 OPEN BURNING UNITS

TA-16 is located in the southwestern quadrant of LANL at the west end of the Pajarito Plateau, near the foothills of the Jemez Mountains (see Figure A-1 in Attachment A). The two OB units at the TA-16 Burn Ground (see Figures G-1 and G-2 in Attachment G), are described below.

The TA-16-388 Flash Pad (see Figures G-3 and G-4 in Attachment G) is used to treat dry high explosives (HE), wet HE, and waste that is contaminated with HE. The wastes that may be treated include, but are not limited to: HE-contaminated solvents and water/solvent mixtures; oils; particulate wastes (e.g., soils and activated carbon); solid combustibles (e.g., wood, cardboard, paper, and cloth); incombustible materials (e.g., glass, metal parts, and equipment); and wastewater treatment residues (wet HE and filters). Most of the waste treated at TA-16-388 is treated using propane burners to supply heat to dry the HE, if necessary, and destroy the HE contamination. In the past, a separate kettle with smaller propane burners also located at TA-16-388 was used to treat HE-contaminated solvents and oils. However, the larger propane burners at the flash pad proved more effective for the destruction of solvents and oils; these materials are now treated in a burn tray with secondary containment at the flash pad. Therefore, the kettle will be removed, flashed, and the metal recycled. The smaller propane burners will be kept as spare parts for the larger propane burners.

The maximum treatment capacity of the TA-16-388 Flash Pad is 40,000 pounds of waste solids for each treatment; however, burns are usually much smaller to assure that all materials are sufficiently

heated to destroy the HE. The maximum treatment capacity for HE-contaminated liquids (e.g., oils and solvents) is approximately 100 gallons. However, the amount of liquid waste treated per burn is adjusted to the amount of liquid that can be treated in a single day. This amount is usually 5 to 30 gallons, considerably less than the maximum treatment capacity. The maximum amount of wet HE that is treated is limited to about 1,000 pounds so that the water can evaporate while the HE is burning.

The TA-16-399 HE Burn Tray (see Figure G-5 in Attachment G) treats bulk HE to destroy the characteristic of reactivity (D003). Most HE burns very well so that no additional source of heat is needed. If any HE residue remains after burning, the waste may be burned again to ensure that all HE is destroyed. The capacity of the HE Burn Tray is 1,000 pounds per burn.

LANL minimizes the impact to the environment by conducting treatment operations in strictly controlled, remote areas within LANL boundaries. Treatment operations are not conducted during adverse atmospheric conditions. The operational and waste management practices for the OB units at the TA-16 Burn Ground are more fully described in Attachment G.

2.2 AUTHORIZED WASTE IDENTIFICATION

The TA-16 OB units are used to treat hazardous wastes bearing a variety of U.S. Environmental Protection Agency (EPA) Hazardous Waste Numbers. The numbers for wastes that may be treated at the OB units are listed in the most recent version of the "Los Alamos National Laboratory General Part A Permit Application," hereinafter referred to as the LANL General Part A.

2.3 CONTAINMENT SYSTEMS

Containment is used to prevent releases during waste staging, burning, and residue management, as described below.

The TA-16-388 Flash Pad is located on a concrete pad with walls on the back and on two sides. The pad is sloped toward the back wall, so that any releases will be contained on the pad and can be removed and properly treated or disposed. The flash pad has a retractable cover, mainly used to prevent run-on. However, the cover also acts as containment to reduce the potential for residues to be blown off the pad by wind.

The TA-16-399 HE Burn Tray is installed on a concrete pad that is surrounded by earthen berms. Wastes are staged on this pad just before a burn, so releases during staging are highly unlikely. After a burn is completed, any residue is covered until it can be removed, reducing the likelihood of ash dispersion by wind.

2.4 INSPECTION SCHEDULES AND PROCEDURES

In accordance with the requirements of 20.4.1 NMAC §§ 264.15 and 264.602 [6-14-00], the TA-16 OB units are inspected daily when in use (i.e., when wastes are managed at the unit) and weekly when not in use. Inspection parameters are specified in Appendix C of the most recent version of the "Los Alamos National Laboratory General Part B Permit Application," hereinafter referred to as the LANL General Part B.

2.5 SPECIAL REQUIREMENTS FOR IGNITABLE, REACTIVE, AND INCOMPATIBLE WASTES [20.4.1 NMAC § 264.17(a)]

Prior to treatment at the TA-16 OB units, the wastes are protected from sources of ignition or reaction. Ignitable or reactive waste is separated and protected from welding activities, hot surfaces, frictional heat, and sources of sparks. Smoking is not allowed within the TA-16 Burn Ground, and a "No Smoking" sign is conspicuously placed at the entrance to the Burn Ground. Together, these measures meet the requirements of 20.4.1 NMAC § 276.17(a) and (b) [6-14-00].

2.6 CLOSURE

Should partial closure of the TA-16 OB units become necessary, partial closure activities will include treatment or removal of untreated hazardous waste from the unit to be closed and management of hazardous waste residues and contaminated system components to meet the closure performance standards. Closure will minimize the need for further maintenance, preclude the release of hazardous waste or constituents to environmental media, and be protective of human health. Detailed closure procedures for the TA-16 OB units are addressed in Attachment F of this permit renewal application. This information is provided to meet the requirements of 20.4.1 NMAC § 264.111 [6-14-00].

2.7 CONTROL OF RUN-ON AND RUNOFF

The TA-16-388 Flash Pad is equipped with a retractable cover and secondary containment to prevent run-on and runoff. The TA-16-399 Burn Tray is equipped with a movable cover to prevent run-on into this structure.

A Storm Water Pollution Prevention (SWPP) Plan has been developed for the TA-16 Burn Ground. The plan is designed to identify any potential pollutants and to provide pollution prevention or control methods to prevent the discharge of pollutants in storm water runoff at the Burn Ground and the surrounding area. Under the SWPP Plan, the facility is required to implement best management practices to reduce the likelihood of pollutants entering the storm water discharges. The plan includes storm water run-on/runoff measures for active units as well as erosion control (e.g., rock check dams) to prevent dispersion of legacy contamination. Because this plan is updated frequently, it is not included as part of this application; however, updates are available upon request. A copy of the September 2001 version of the TA-16 Burn Ground Unit SWPP Plan was included as Appendix E in LANL's "Response to Notice of Deficiency; TA-16 Part B Application Revision 3.0, January 31, 2000" (LANL, 2002a), submitted to the New Mexico Environment Department in February 2002.